Falls Incidence and Prevention on an Inpatient Adult Medical Unit

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1 Background

The National Database of Nursing Quality defines a fall as an unplanned descent to the floor with or without injury (Miake, Hempel, Ganz, & Shekelle, 2013). Falls are a key quality measure that hospitals must report, and falls with injury result in lack of reimbursement from CMS for Medicare and Medicaid patients. For this reason, units must use the literature and an understanding of their own patient population to implement appropriate fall prevention measures.

Falls are predicted by both intrinsic [patient] and extrinsic [environment] risk factors. Intrinsic risk factors include older age, recent fall, muscle weakness, confusion, urinary incontinence or frequency, prescription of known "culprit" drugs, postural hypotension, and longer hospitalizations. Extrinsic risk factors include poor lighting, trip hazards, low chair height, or unsafe staffing levels (Oliver, et al., 2010).

Our quality improvement project sought to understand the risk factors and characteristics of individuals who fall on Nelson 7 and to propose evidence-based interventions tailored to this patient population to prevent future falls.

2 Objectives

1. Determine root cause for the 24 falls on an inpatient adult medical unit in FY16.
2. Review Hopkins Event Reporting Online (HERO) reports and charts of fallers to determine intrinsic, extrinsic, clinical and contextual fall risk factors for this unit.
3. Identify unit-specific falls prevention best practices.

3 Methods

- Literature review
- Evaluation of HERO report data
- Chart review
- Data analysis

At Johns Hopkins Hospital, falls are reported in a system called HERO. We evaluated the HERO reports from FY16 for Nelson 7, an inpatient medical unit. Additionally, we aggregated and organized falls data using a data extraction tool based on known fall predictors cited in the literature. Data collected included age, sex, BMI, date and time, fall activity, presence of injury, JHFRAT (Johns Hopkins Fall Risk Assessment Tool) score, admission diagnosis, length of stay, frailty status, interventions in place, continence, mental status, presence of culprit drugs, presence of bed alarm, and presence of specialty mattress. Documented interventions were evaluated based on JHFRAT score and compared with hospital policy recommendations based on best practice evidence.

4 Results

Of the 24 falls on Nelson 7 in FY16, 22 unique patients fell and one patient fell three times. Fall incidence during this period was 3.01 per 1000 occupied bed days. The incidence of falls with injury was 0.92 per 1000 occupied bed days. Half of the falls occurred between December 21, 2015 and February 27, 2016. One patient fell 3 times in January-February.

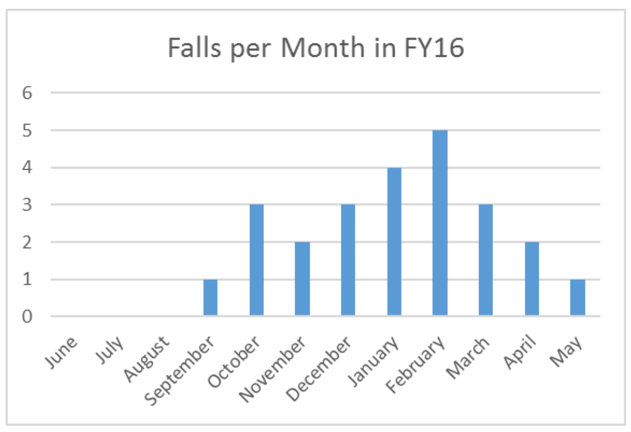

Figure 1. Falls per month in FY16. Half of the falls occurred between December and February.

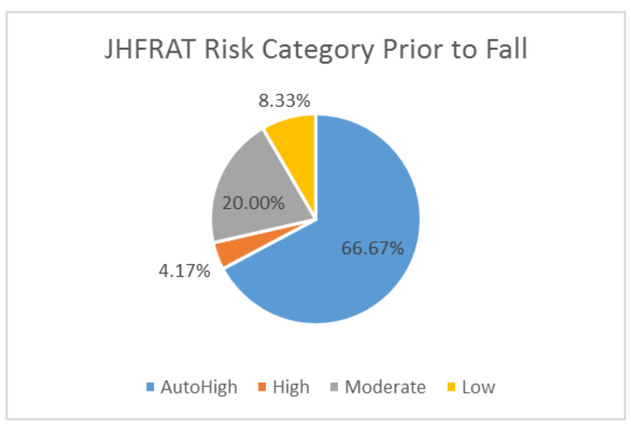

Figure 2. Vast majority of fallers scored AutoHigh on JHFRAT.

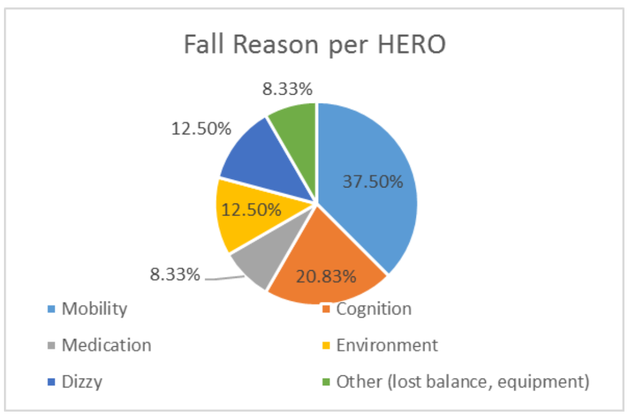

Figure 3. Highest percentage of fallers fell for mobility or cognition-related reasons.

Clinical Risk Factor	n (%)
Fall in past 6 mos	18 (75)
AMS*	16 (66.7)
Incontinence	8 (33.3)
RecoverAir	2 (8.33)
Frail	1 (4.17)
Drug Risk Factor	**n(%)**
Cardiac drugs	12 (50)
Psychotropics	10 (41.65)
Diuretics	4 (16.6)
Lactulose	1 (4.17)

Table 1. Most prevalent risk factors among patients who fell. **Altered mental status*

5 Conclusions

25% of patients who were scored at AutoHigh risk for falls were given only basic safety interventions. Frequently, patient met criteria for AutoHigh risk, but full JHFRAT was completed, producing a different score.

Inconsistent fall documentation was present. Two falls were not recorded in a nursing note in POE and one fall was recorded in POE but not in HERO.

Recent fall, altered mental status, cardiac drugs, psychotropic drugs, and incontinence were the most frequent risk factors among patients who fell.

6 Future Directions

We recommend ongoing monitoring of falls data to monitor trends. Based on this project, a three pronged intervention is recommended to decrease future falls incidence:

1. Nursing education on administration of the JHFRAT and interventions to be implemented per risk category
2. Nursing education on adverse event documentation
3. Interventions targeting individuals with altered mental status

7 References

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